

IN THE CLAIMS:

1-12 (Canceled):

13. (currently amended) Barium sulfate, produced by a process wherein a barium salt solution and a sulfate solution are simultaneously and continuously brought together in equimolar quantities in a precipitating suspension at a temperature of 30 to 90°C, with constant stirring to produce at least one of lamellar barium sulfate particles in needle-shaped barium sulfate particles, the precipitating suspension is withdrawn continuously in a steady volume and the barium sulfate precipitate is filtered, washed and optionally dried, wherein the barium salt solution has a concentration of 0.1 to 0.8 Ba²⁺ mol/l and the sulfuric acid has a concentration of 0.1 to 2.0 SO₄²⁻ mol/l and the flow rate and stirring speed are controlled, at a constant precipitation volume, in such a way that a pH value of 1 to 9 is obtained in the precipitating suspension, wherein the lamellar particles are ~~0.1~~ 1 to 50 µm wide, ~~0.1~~ 1 to ~~50~~ 50 µm long and 0.1 to 2 µm thick and the needle-shaped particles are ~~1~~ 0.1 to 50 µm long and 0.1 to ~~2~~ 2 µm thick, the ratio of length or width to the thickness being 3:1 to 500:1.

14. (canceled)

15. (new) A process comprising producing barium sulfate by a continuous process wherein a barium salt solution and a sulfate solution are simultaneously and continuously brought together in equimolar quantities in a precipitating suspension at a temperature of 30 to 90 °C, with constant stirring;

withdrawing the precipitating suspension continuously and in a steady volume;

filtering the barium sulfate precipitate;

washing the filtered and optionally dried, wherein the barium salt solution has a concentration of 0.1 to 0.8 Ba^{2+} mol/l and the sulfuric acid has a concentration of 0.1 to 2.0 SO_4^{2-} mol/l, and the flow rate and stirring speed are controlled, at a constant precipitation volume, in such a way that a pH value of 1 to 5 is obtained in the precipitating suspension and lamellar barium sulfate particles or needle-shaped barium sulfate particles are produced, wherein said lamellar barium sulfate particles are 1 to 50 μm wide, 1 to 50 μm long and 0.1 to 2 μm thick and the needle-shaped particles produced as result of the precipitation are 0.1 to 50 μm long and 0.1 to 2 μm thick, the ratio of length or width to the thickness being 3:1 to 500:1.

16. (new) The process of claim 15, wherein after the barium sulfate is worked the barium sulfate in the precipitation suspension is treated with at least one aftertreatment selected from the group consisting of an organic aftertreatment and an inorganic aftertreatment

17. (new) A composition comprising a plastic and the barium sulfate of claim 13.

18. (new) A coating comprising the barium sulfate of claim 13 and at least one metal oxide or metal compound.

19. (new) A composition comprising an elastomer and barium sulfate of claim 13.

20. (new) A composition comprising a sealant and the barium sulfate of claim 13.

21. (new) A composition comprising an adhesive and the barium sulfate of claim 13.

22. (new) A composition comprising a filler and the barium sulfate of claim 13.

23. (new) A composition comprising a varnish and the barium sulfate of claim 13.

24. (new) A composition comprising a paint and the barium sulfate of claim 13.

25. (new) A composition comprising paper and the barium sulfate of claim 13.
26. (new) A composition comprising negative electrode paste comprising the barium sulfate of claim 13.
27. (new) A method for producing the composition of claim 17 comprising admixing a plastic and said barium sulfate.
28. (new) a method for producing the coating of claim 18, comprising admixing said barium sulfate with said at least metal oxide or metal compound.
29. (new) A method for producing the composition of claim 19 comprising admixing said barium sulfate and an elastomer.
30. (new) A method for producing the composition of claim 20 comprising admixing said barium sulfate with said sealant.
31. (new) A method for producing the composition of claim 21 comprising admixing said barium sulfate with said adhesive.